The Point

A newsletter for and about the people of the
U.S. Army Medical Research and Materiel Command
Autumn 2009

USAMRMC Welcomes Maj. Gen. James Gilman

First on his agenda is to make sure the U.S. Army Medical Research and Materiel Command becomes the place that brings medical military and civilian communities together said Maj. Gen. James Gilman, USAMRMC and Fort Detrick commander. He says the most exciting part about his job will be meeting people who make up USAMRMC. "They see Army medicine through a different lens than I do. It will be exciting to learn their perspective," said Gilman.

Gilman spent most of his 31 years working in a hospital. He has two goals for himself. His first goal is to learn more about research and development and its procedures and processes in the span of 3 months. "I think the most challenging part for me is that there are so many people who have different expertise and are very technical, which means they have their own vocabulary that I have to learn. Parts of this Command span around the globe. I would like to connect with them as fast as I can. I want to see people where they are as quickly as possible," said Gilman. His second goal is to find out if there are any changes that need to occur. Taught early on in his career, he learned to see the big picture by Lt. Gen. Bank. Another mentor, Gen. Peake, emphasized credibility and the need to put hard work in every task. "I was taught that completing a task wasn't going to be a sales pitch, you had to know your stuff," said Gilman.

If you want to get on his good side fast, talk about golf. Not only does he like golf, but he likes to read and travel. His family's favorite vacation spot is Disney World. Raised in churches, family values are especially important to the Gilman family. "In the past, I was involved with different groups like the family readiness group," said Jeffri Gilman, wife of Maj. Gen. James Gilman. The high school sweethearts said they have enjoyed every duty station. "It's best not to compare duty stations. You should take advantage of what each place has to offer," said Jeffri Gilman. "Fort Detrick and the Frederick community actually remind both of us of our hometowns. We are enjoying it here."

Tiffany Holloway
USAMRMC Public Affairs Office

Natick Soldier Systems Center Holds Exhibit on Beacon Hill

The Natick Soldier Systems Center held an installation exhibit in the Great Hall, Capitol Building, Beacon Hill, Boston, Mass. May 28. Massachusetts state representatives, senators, and aides were all in attendance. Sen. Karen Spilka (D-Natick) served as hostess. While visiting the exhibit, Gov. Deval Patrick welcomed NSSC representatives and commented on the enormous impact the installation has on the local area and its importance to the state of Massachusetts and to national defense.

Mountain medicine research and the Warfighter Physiological Status Monitoring System were featured, and altitude research/facilities and future directions were highlighted. The recently developed Modular Operational Ration Enhancement, Type I – High Altitude ration was on display. This ration was developed by the Department of Defense Combat Feeding Directorate, Natick Soldier Research, Development, and Engineering Center, and is designed as an eat-on-the-move ration that is high in carbohydrates. U.S. Army Research Institute of Environmental Medicine researchers have found that consuming carbohydrates during work exertion at altitude helps sustain a Warfighter's physical and cognitive performance.

A WPSM prototype belt was on display. This device is used to access a Soldier's health status while on the battlefield. It provides leaders and medical personnel with the vital real-time health status of a Soldier by recording EKG waveform, heart rate, respiration rate, and body orientation via gyroscopic sensors. This information helps medics and commanders to efficiently triage Soldiers in their squad/team. A future modification may be to include a barometer to track altitude exposures.

Terry Rice
USARIEM Public Affairs and Marketing

USAMMCE Hosts Joint Training Event

To strengthen the bond between American and German Soldiers, the U.S. Army Medical Materiel Center, Europe, located in Pirmasens, Germany, hosted a training event June 26.

During the annual event, 40 Bundeswehr Soldiers and reservists, as well as members of a civilian ambulance service, visited USAMMCE to train with American Soldiers. The Soldiers and reservists traveled to Pirmasens from several units around Rhineland Pfalz and the Saarland region. German soldiers set up two field ambulances and demonstrated the use of their equipment. A field surgeon was present to answer questions. After an overview briefing of USAMMCE's operation, the Soldiers were divided into groups to tour the facilities where they experienced how USAMMCE renders medical materiel support to the Europe Command, Africa Command, and Department of State units around the world.

Doris Crittenden
USAMMCE Public Affairs Office

Army Research Lab Creates Indoor Firing Capability at Experimental Facility 10

A ribbon cutting ceremony was held May 26 to celebrate an indoor firing capability at Aberdeen Proving Ground, Md. Experimental Facility 10 was refurbished and upgraded to support quick-response experimentation in understanding battlefield events.

"In today's environment senior leadership wants answers to events now. Having EF10 online will help provide timeliness to those requests," said Lt. Col. Kelly Halverson, Joint Trauma Analysis and Prevention of Injury in Combat program manager. Features include indoor and outdoor small to medium caliber kinetic energy penetrator firings, outdoor explosive operations, and state-of-the-art instrumentation, such as digital x-ray and high-speed video.

This capability is the result of a partnership between the U.S. Army Research Laboratory and the U.S. Army Medical Research and Materiel Command, under whose auspices the JTAPIC program was established.

Source information provided by JTAPIC

Change of Command June 2009

Maj. Gen. James Gilman is the new commander of the U.S. Army Medical Research and Materiel Command and Fort Detrick. His change of command ceremony was held June 11 at Fort Detrick's Blue and Gray Field.

Source information provided by the USAMRMC Public Affairs Office
Photos by the Fort Detrick Visual Information Office

The Point is published quarterly. Its contents do not necessarily reflect the official views of the U.S. Government, the Department of Defense, or the U.S. Army. Editorial content is prepared by the U.S. Army Medical Research and Materiel Command Public Affairs Office; 301-619-7549 or DSN 343-7549.

TATRC Hosts Technology Expo

The U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center invited the Fort Detrick and Frederick communities as well as the industry's top executives in technology to view the latest and greatest breakthroughs in advanced medical technologies from a variety of TATRC initiatives June 17–18.

"The DoD/AMEDD is building two new hospitals—Walter Reed National Medical Center and Fort Belvoir—and we want to showcase emerging technologies suitable for these new hospitals. Another reason for the event was to showcase a variety of emerging, cutting-edge medical technologies and bring to the awareness of the MRMC Command and subordinate organizations, labs, and research area directorates," said Col. Ron Poropatich, deputy director of TATRC.

TATRC showcased more than 49 projects with principal investigators who produced medical devices and electronic health record interoperability, advanced communication technologies, telemedicine, robotics, personalized health care, medical logistics, RFID technologies, medical modeling and simulation trainers, and other medical advances that are ready for deployment to the battlefield or will be deployable in the near future. Demonstrations were hands-on and interactive, and each consisted of a brief presentation.

Some of the newest breakthroughs were in medical modeling and simulation and robotics. "Medical simulation will improve upon health delivery, patient safety, and training medical personnel," said Harvey Magee, TATRC's technical director of Medical Simulation and Training Technologies. The Compartment Syndrome Simulation System is one of the technologies that his area showcased. The overall goal was to create and validate a prototype simulator for practicing skills of diagnosis and treatment related to compartment syndrome. The system uses collocated haptics and graphics to give the user the feel and look of palpation and cutting as related to fasciotomy.

Woodward Bewley Tech Development, LLC, created an initial prototype that generates hydrogen gas from salt water with a small electrical catalyst to generate a 100 watt PEM fuel cell. "This power supply is hybrid. It is a significant development because it is quiet, environment friendly, and it can generate power for a long period of time," said Adam Bewley, program manager of Woodward Bewley Tech Development. Chris Larson, senior scientist with Vecna Technologies Inc. showed guests the BEAR, a robot that has four cameras, can carry up to 600 pounds, can walk up stairs or slopes, and is able to search and rescue in hazardous conditions.

The inventions seen at the event will take up to 5–10 years to be fielded. Poropatich said, "It is important to ensure that technologies being developed fit into the big Army or Medical Command requirements and doctrine development. This is how sustained funding is assured. We are in various stages of getting these technologies into formalized programs of record."

Tiffany Holloway
USAMRMC Public Affairs Office

The Physiological Serpentine Arm mounted on an LSTAT (Life Support for Trauma and Transport) litter carrier.

Dr. Sylvain Cardin, TATRC's portfolio manager for Human Performance and Optimization, demonstrates a collaborative research effort between TATRC and Carnegie Mellon University to senior DoD leadership. The Physiological Serpentine Arm is mounted to the LSTAT.

Photos by Dave Rolls

The ABO/Rh Blood Typing Card is a new device that can determine a person's blood type in less than 30 seconds from a single drop of blood.

Partners from the University of Maryland Medical Center demonstrate to TATRC's Medical Modeling & Simulation technical director, Mr. J. Harvey Magee, the latest developments and advances in simulation training.

New Rapid Blood Typing Test for In-Field Donor Screening

A new rapid blood typing test is expected to be available by the end of this year. The test will provide a rapid, portable, cost-efficient way to determine the blood type of potential donors, which will make blood collection safer for Soldiers in the field. "Current blood screening methods are labor and time intensive, with results produced up to hours later remote from the collection center. Fast turnaround screening is needed to register new donors and schedule blood draws in response to emergent medical needs," said Col. Karl Friedl, director of the Telemedicine and Advanced Technology Research Center. Sometimes blood products from military collection centers do not reach local areas of high demand because mobile surgical units have limited carrying capacity. Currently, medical personnel may have to wait hours or days to qualify a blood donor for responding to emergency blood supply requirements.

The U.S. Army Medical Research and Materiel Command's TATRC has been collaborating with Micronics' Dr. Diane Wierzbicki to help her team advance the card through clinical trials with the goal of getting a U.S. Food and Drug Administration-approved product out to Soldiers in the field. The new Micronics ABO/Rh Card is a disposable, credit card-sized device that can accurately determine ABO blood type and Rh factor from a single drop of blood in less than 30 seconds. It is the first device that does not require refrigeration or supporting equipment and works in a closed system to protect the blood sample and reagents from environmental contamination. Wierzbicki said TATRC has helped Micronics enlist investigators with access to large volunteer populations to complete field trials of the device in a timely manner. "The ABO/Rh Card will make it possible to recruit those with specific blood types for which there is the greatest need—to put them at the head of the line, in effect. This could be in response to military field operations, during time of natural disaster, or other medical emergencies where the military provides vital services. The card also provides another layer of safety by enabling personnel in the field to confirm the blood type stated on the Soldier's dog tag," said Wierzbicki.

Barb Ruppert
TATRC science and technology writer

The Micronics ABO/Rh Blood Typing Card will indicate blood type and Rh factor in less than 30 seconds. The card is the size of a credit card.

Exercise Offers Unique Training Opportunity for Bioterrorism First Responders

Fort Detrick hosted an all-day training exercise for several agencies responding to a realistic scenario involving biological terrorism. Experts from the U.S. Army Medical Research Institute of Infectious Diseases, the Pennsylvania National Guard's 3rd Civil Support Team, the U.S. Army Medical Materiel Development Activity, Fort Detrick police and fire departments, and the Federal Bureau of Investigation were on hand to manage various parts of the exercise, which gave them an opportunity to exercise unique capabilities that would be brought to bear in a "real" emergency. Those capabilities include environmental sampling, detection and identification of a suspected biological agent, medical care and transport of casualties, decontamination of the site, consequence management, and communication between law enforcement, hazmat teams, and medical personnel.

Setting the Scene

It started April 15 at 6 a.m., a cold, rainy morning, when the Fort Detrick fire department responded to an emergency call. When crew members opened the door to Building 1224 on Area B (the section of the post often referred to as "the farm"), they found what appeared to be a clandestine biological laboratory. After photographing and securing the site, they called in the Pennsylvania National Guard's 3rd CST. The CST's job is to augment local and regional terrorism response capabilities in events that are known or suspected to involve weapons of mass destruction, such as chemical, biological, or radiological agents. The team can depart within 90 minutes of notification to support civil authorities if there is a suspected WMD event, according to Lt. Col. Timothy Gwinn, CST commander. Once fire officials had briefed Gwinn, he and his team used the 90-minute drive to Fort Detrick to plan their response even before they arrived.

According to Gary "Wes" Carter of USAMRIID's Field Operations and Training Branch, who coordinated the exercise, the scenario continued to mature as the day progressed. The initial plan was for CST personnel to arrive, set up, and enter the building in two "waves," clad in protective gear. The first wave would assess the situation and brief the commander; the second wave would collect samples and test them in a specially equipped analytical laboratory vehicle on-site. To make things more challenging, the team also had to respond to a "man down" scenario in which one of the CST members collapsed during the building survey and had to be decontaminated, cut out of his protective suit, and evacuated for medical assessment and care.

Diagnostics on the Ground

In the event of a real biological event, laboratory diagnostics would play a key role, according to Carter. Unlike chemical agents, which act instantly, biological agents have an incubation period—it can take days for people who have been exposed to an agent to develop symptoms. By then, valuable treatment time has already been lost so it is critical to identify the agent as quickly and accurately as possible. USAMRIID's Field Identification of Biological Warfare Agents course provides hands-on training for students in performing relatively sophisticated laboratory tests in a field setting. FIBWA is now required training for all CSTs, and this exercise "gave them a realistic venue and realistic samples to help them test their skills," according to Carter.

Carter and colleague Rick Arestad, both FIBWA course instructors, set up the scenario for the exercise and included simulants for the agents that cause smallpox, anthrax, and botulism. These simulants are safe to use because they do not cause disease, but they do produce a positive result when used in laboratory tests. "This was a one-of-a-kind opportunity for us, and USAMRIID did an outstanding job in challenging our capabilities," commented Gwinn, CST commander. "They gave our team a realistic scenario and a huge number of samples to collect and process in our mobile lab." Sgt. 1st Class David Walck, who was part of the CST survey team, also thought the training was very realistic. He appreciated the opportunity to test DNA extraction techniques and polymerase chain reaction techniques for identifying the causative agent of smallpox. "It's always nice when something different is set up," he said. "Chemical scenarios are pretty easy to do, but there aren't that many places where we can train with bio scenarios."

Medical Care and Medical Products

As diagnostic testing got under way, two U.S. Army SMART (Special Medical Augmentation Response Team) teams were handling the medical response. SMART is a U.S. Army Medical Command asset designed to offer specific capabilities where needed. Those involved in the exercise were members of the SMART-AIT, or Aeromedical Isolation Team, which can perform patient evacuations under biocontainment conditions, and the SMART-IND team, which handles the use of Investigational New Drugs for treating casualties of a biological attack, if deemed necessary.

According to Lt. Col. Max Teehee of USAMMDA's SMART-IND team, members set up the medical treatment area after being notified that morning that a clandestine biological laboratory had been discovered, and there were reports of sick people in the community. Later, when the CST member became incapacitated and was decontaminated, the ambulance brought him to the treatment area for assessment.

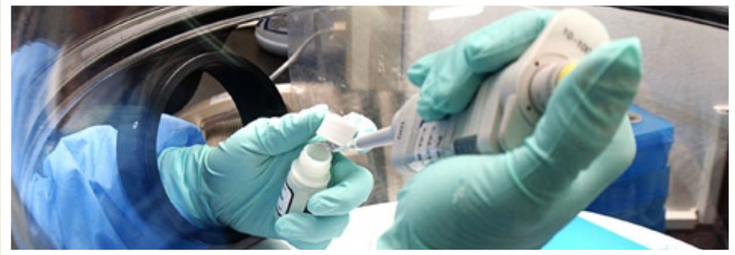
"With the report that children in the community had symptoms of fever and a chicken pox-type rash, and the CST patient experiencing fever and chills, the possibility of an exotic infectious agent was a plausible scenario for the purposes of the exercise," said Teehee. "We handled the patient as a contagious infection with an exotic disease." The CST laboratory confirmed that the CST "patient" had a poxvirus infection, most likely smallpox. Upon consultation with appropriate experts, the SMART-IND team initiated a smallpox treatment algorithm using an IND protocol. Teehee explained that to treat the "patient" with cidofovir—a drug that has demonstrated efficacy against poxviruses but is not yet licensed by the Food and Drug Administration for such use—the team had to set up an emergency protocol. This included convening an emergency meeting of the command's Human Subjects Research Review Board, the panel that reviews all research protocols involving human subjects.

"The exercise was a very valuable tool in testing communications between the SMART-IND team, the HSRRB, Barquist pharmacy, and all the other entities involved," said Teehee. "The board members were superb in the emergency meeting. A quorum of committee members was reached, discussion held, and approval granted in less than 2 hours…and none of the members had been prewarned about the exercise." Once the panel gave its approval and the investigational drug was delivered to the site, the "patient" had to sign an informed consent form to receive it. Informed consent means he had to be briefed on the potential benefits and risks of the treatment—and agree to them—before the treatment could be administered. Teehee said the SMART-IND team found several small elements to improve in the field (such as waterproofing of forms) but that equipment set-up and the patient consent process "went well" and provided great training. After treatment, the patient was handed off to the SMART-AIT for transport to USAMRIID's patient containment suite.

A Visit to the "Slammer"

USAMRIID's medical containment suite, informally known as "the slammer," was originally created to isolate and care for personnel who had potential exposure in a maximum containment, or biosafety level 4, laboratory. Like those laboratories, the suite can

*See "**Bioterrorism**" next page*



Bioterrorism *(continued)*

be maintained under negative pressure, and all the waste streams are sterilized. It can be staffed by medical personnel wearing "space suits" to protect against deadly viruses, like Ebola, for which there are no FDA-licensed vaccines or therapies.

When the institute began sending research teams to other countries to assist with exotic disease outbreaks, the AIT was created. Its mission was to deploy to the field and bring back personnel in the event of an exposure overseas, according to Cpt. Thomas "Rhett" Robinson, officer in charge of the AIT. Eventually, the Department of Defense decided to make the team an official SMART team under the Medical Command. There have been about 20 patients admitted for observation in the slammer's 35-year history, most recently a USAMRIID investigator who had a needle stick in 2004 while working with a weakened strain of Ebola virus. Fortunately, neither she nor any of the patients admitted to the slammer ever became ill.

Staff Sgt. Cesar Allen, the CST's mock patient for the exercise, said the bedside manner of SMART IND and AIT team members was "awesome."

Robinson said the exercise gave his team the chance to try a new rapid deployment plan, and it went off without a hitch. "We sent out an eight-man package including one doc, one nurse, five medics, and one lab tech, with a reduced footprint," he said. "We were able to successfully contain and transport the patient on almost no notice, in the rain, and with minimal gear. It was also a chance to get some of our new personnel familiar with some of the equipment and procedures." Originally, Robinson said, the plan was to use the whole team and its oversized negative pressure isolation stretchers. He reduced the footprint according to mission needs and what would be expected to fit on a small aircraft, vehicle, or rotary wing airframe based on the information he was given for the exercise. "Now that I know it is feasible and there is no mission compromise, this will be my recommendation for future MEDEVAC missions that are under 4 hours or 300 miles away," he commented. The SMART-AIT brought the "patient" to USAMRIID via ambulance and admitted him directly to the slammer, where his vital signs were taken and medical staff began administering supportive care.

Looking to the Future

"We appreciate USAMRIID hosting this training exercise," commented Special Agent Kenneth R. Werstak, Jr., of FBI's Baltimore Division, which strongly supports opportunities for interagency training. "As a WMD coordinator for Maryland and Delaware, I find it particularly valuable to train with other agencies investigating suspect WMD matters in the same territory. Lessons learned in this environment are critical to our success in the event of an actual situation." According to Arestad, one of those lessons is that it can sometimes be difficult to walk the line between environmental sampling and evidence collection. "On the one hand, [the response team] is collecting samples to determine what bio agent they're dealing with," he explains. "Then you have law enforcement [personnel] whose job is to secure the scene and collect the evidence. It's critically important for the two groups to communicate with each other."

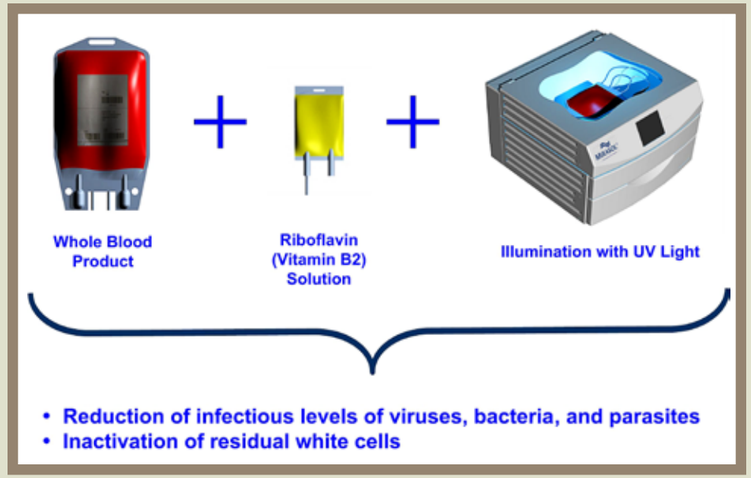
Communication was a common theme echoed by several personnel who participated in an after-action review the next day. With so many players, it was challenging at times to keep track of all the "moving parts," according to Carter, and it was tough for him to come up with a scenario that fit all of them. The complexity of the setup, added Gwinn, could make it hard to get from start to finish in 1 day, depending on the team and how the scenario plays out. "Next time, I can envision having just the CSTs involved, either one or two at a time," said Carter. "Without the SMART teams, one CST could have the option of calling in a second one, and we could make it a 24-hour operation." Speaking of "next time," Carter said USAMRIID has already been contacted by several agencies that heard about the exercise and are eager to get involved in future training events. "One thing we were all reminded of is that training really does pay off," he commented. "People hear about the funds that are being devoted to bioterrorism preparedness, and there are some who question whether it's doing any good. But when you come out here and see these guys in action, it answers the question: Can we do this job? The answer is: Yes, we can."

Caree Vander Linden
USAMRIID Public Affairs Office

New Technology to Improve Safety of Blood Transfusions on the Battlefield

How do you tell a Soldier that the blood transfusion used to save his life on the battlefield may have exposed him to a potentially harmful virus, bacterium, or parasite? While blood collected beforehand is carefully screened and generally very safe, it is not always available in the whole-blood form needed for immediate combat casualty situations nor might there yet be a test for new organisms to which donors in the field may have been exposed. Given time constraints, using unscreened or untested blood is sometimes a necessary risk to prevent fatalities. New technologies now in the U.S. Food and Drug Administration approval process will greatly minimize these risks.

The U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center is actively supporting researchers who are developing processes to improve the safety of blood products (e.g., whole blood, red blood cells, platelets, and plasma). They are working on advanced technologies that can quickly and easily inactivate bacteria, viruses, and parasites that could cause disease in blood products donated in the field. The research team led by CaridianBCT Biotechnologies chief science officer Dr. Raymond Goodrich is focusing on whole blood first because studies have shown it to be most beneficial in combat casualty care. Goodrich explains, "Our process is proactive and universal; we don't have to know exactly what pathogens are in the blood in order to inactivate them. In one treatment, we reduce the risks arising from any bacteria, virus, parasite, and donor white cell contamination of donated blood products."



A new portable system uses Mirasol™ (riboflavin) and ultraviolet light to inactivate disease-causing organisms in donated whole blood.

Researchers at CaridianBCT Biotechnologies have created a portable system that uses Mirasol™ (riboflavin) and ultraviolet light to inactivate disease-causing organisms or pathogens. The process induces a chemical reaction within pathogens' nucleic acids that leaves them unable to replicate and cause harm. It also inactivates the donor's white blood cells that could cause immune complications in the transfusion recipient. Goodrich adds, "A technology such as Mirasol is particularly important for the blood supply in general, given the greater mobility of the world's populations and the changes in global climate that expand the range of disease spread."

The Mirasol system for platelets and plasma is currently approved and available in Europe. The whole-blood system is in its first U.S. human clinical trial as part of the FDA approval process for use in the United States. "The connections and contacts provided by TATRC have been incredibly important in helping us focus on developing the right product for military needs. TATRC has inspired us to apply the financial resources we steward in the best ways possible to bring this technology into reality," says Goodrich. TATRC director Col. Karl Friedl says, "This collaboration is a prime example of how TATRC seeks to harness new knowledge to support the deployed Warfighter."

Barb Ruppert
TATRC science and technology writer

Former Navy Secretary Addresses National Biodefense Policy Issues

The Honorable Richard Danzig, former Secretary of the Navy, gave a seminar on national biodefense policy issues July 9 before a capacity crowd at the U.S. Army Medical Research Institute of Infectious Diseases. Danzig served as the Under Secretary of the Navy from November 1993 to May 1997 and was appointed Secretary of the Navy on Nov. 16, 1998. He is currently a consultant to the Pentagon and the Department of Homeland Security on bioterrorism issues.

Danzig opened his seminar by commending the USAMRIID workforce on its groundbreaking discoveries in the field of biodefense. He reiterated the importance of the institute and called USAMRIID's employees the "go to" people for biodefense and bioterrorism issues. He also acknowledged that while USAMRIID's work is often underappreciated, it is essential for the future of biodefense. Danzig discussed the characteristics associated with bioterrorist events, noting that there may not be any indication of an attack when it first occurs. He mentioned the variety of methods that can be used to execute these types of attacks and pointed out that, in his opinion, the United States has response gaps in its contingency plans in case of an attack.

His address included nine main points: planning, leadership, awareness, identifying sources, decontamination, questioning, international occurrences, private sector, and new technologies. Danzig stressed that government officials and scientists must develop answers to questions that would be raised by the general public if a bioterrorist event were to occur. Currently, there are no instructions on what citizens should do if the United States is presented with this situation, and he emphasized the importance of planning. "There has been a lot of planning," he said. "But it doesn't meet the level of standards that the military must follow prior to any contingency, such as planning for triage, evacuation, resupply, decontamination, and so forth."

According to Danzig, depending on first responders at the local level would only cause confusion and could be detrimental to an organized response. He also said the expertise lies in the federal government and that localities and the military should not be solely relied upon. "We subscribe to the myth that the locality would be in charge at our peril," he noted. "At the same time, we can't expect the military to come in and 'save the day' without significant preparation." He presented several scenarios demonstrating the necessity of developing plans ahead of time and getting some "money in the bank," as he put it, toward bioterrorism defense. "It is vital to think and develop ideas now, with the purpose of acting later, and making the certain investments that need to be made," he commented.

Kierstin O'Guinn
USAMRIID public affairs assistant

USAMRICD Supports Presidential Inauguration Parade

Staff members from the U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Md., supported the 2009 Presidential Inauguration Parade. Dan Boehm and Maj. LeRoy Marklund volunteered as remote medical instructors for the Defense Medical Readiness Training Institute, Fort Sam Houston, Texas, while Adrienne Graham provided logistical support. These individuals trained more than 100 U.S. public health officers at Andrews Air Force Base, Md., Jan. 18 to medically support the parade.

Medical training included primary trauma patient assessment, airway management, and hemorrhage control, which were taught at the advanced life support level. In return for this valuable training, DMRTI was recognized by Navy Rear Admiral Robert Williams, acting deputy surgeon general of the United States, and Navy Rear Admiral David Rutstein, chief medical officer, U.S. Public Health Services Commissioned Corps, with the Surgeon General's Outstanding Service Award.

Source information provided by USAMRICD

Celebrating the 234th Birthday of the Army

Photo by Doug Valentine

Command Sgt. Maj. Michael Kelley of the U.S. Army Medical Research and Materiel Command helped celebrate the Army's 234th birthday June 17 by reading to children at the Fort Detrick child, youth, and school services' gym.

"I was excited to read *Sam the Army Dog* to the children. I was diggin' it," said Kelley.

Sam the Army Dog is a book that encourages espirit de corps and reminds everyone that anyone can help serve their country.

Source information provided by USAMRMC

USAMRICD Cyanide Expert Retires

The U.S. Army Medical Research Institute of Chemical Defense said goodbye to one of its most prolific scientists. Dr. Steven I. Baskin, who retired from federal service after 27 years, was a pharmacologist/toxicologist at the institute and an expert on the chemical warfare agent cyanide. His research through the years significantly contributed to the development of therapeutics and diagnostics for cyanide intoxication.

Col. Harry F. Slife, Jr., USAMRICD's commander, who had also once been Baskin's division chief, said Baskin was a source of information and ideas, and a sounding board. As Slife explained, "he had an understanding of what we're trying to do here." Slife called Baskin a true patriot for dedicating his career to the defense of his country and for continually contributing to the chemical defense research program. Slife also credited the seminal cyanide research of Baskin, as well as of his colleague USAMRICD scientist Dr. Gary Rockwood, for attracting to the institute funding from the National Institutes of Health for the development of cyanide antidotes as part of NIH's efforts to provide medical countermeasures to protect the civilian population in the event of a terrorist attack with chemical weapons. These sentiments were echoed by Dr. Gennady Platoff, a former commander of USAMRICD, who serves as the scientific advisor and assistant director of the Office of Biodefense Research at NIH. Platoff acknowledged the efforts of Baskin and Rockwood for getting NIH's cyanide program off the ground.

At the recent retirement ceremony for Baskin, Platoff described him as "incredibly imaginative," a sentiment echoed by another USAMRICD scientist, Dr. William Smith. According to Smith, Baskin was "full of ideas" and so familiar with his toxicology peers and knowledgeable about various types of chemicals that Smith often referred to him as a "walking phone book of toxicologists" and a "walking pharmacopedia."

Baskin began working at USAMRICD in 1982, bringing with him a specialization in cardiovascular and neuroendocrine research. He graduated with honors from the University of Southern California in 1966 with a doctor of pharmacy degree and received his doctorate in pharmacology and toxicology from The Ohio State University, Columbus, Ohio, in 1971. He then conducted his postdoctoral training at Michigan State University (1971–1973). Before being recruited by USAMRICD, Baskin worked as an associate professor at the Medical College of Pennsylvania. Baskin is a Diplomate of the American Board of Toxicology and a Fellow in the Academy of Toxicological Sciences. He has edited or coedited 6 peer-reviewed scientific publications and has been an author or coauthor of more than 100 scientific publications and presentations. In addition, he has written 6 books, 58 book chapters, and 24 technical reports.

At his retirement ceremony, Baskin was presented with a Department of the Army Certificate of Achievement, a USAMRICD Certificate of Achievement, and a Department of the Army Commander's Award for Civilian Service. Slife presented Baskin with one of his commander's coins, #27, for the number of years Baskin worked at USAMRICD. At the request of Brig. Gen. Timothy Adams, Slife also presented Baskin with one of the coins from Adams's tenure as USAMRICD commander. Platoff too presented Baskin with one of his commander coins, and Maj. Matthew Clark, a former branch chief of Baskin's, gave the retiring scientist a coin from the Pentagon where Clark currently is assigned as deputy chief of Capability Integration at the Army Asymmetric Warfare Office, Army G-3. The coin from Clark was designed with images representing each of the services, fitting for someone like Baskin who, Clark said, always did "his best by all members of the services." Baskin also will receive a bound volume of his open literature journal publications from the institute.

Aside from Platoff and Clark, other guests at the ceremony were Baskin's son, Lloyd, and Dr. Harry Salem, chief scientist for Life Sciences at the Edgewood Chemical Biological Center, who worked closely with Baskin on several publications.

Cindy Kronman
USAMRICD

USAMRICD Scientist Co-Authors Award-Winning Paper

One of the U.S. Army Medical Research Institute of Chemical Defense's own was selected as writing the best dermatology paper among the manuscripts published in the journal *Cutaneous and Ocular Toxicology* in 2008.

Dr. John Graham co-authored the scientific article entitled "Transcriptional Responses Associated with Sulfur Mustard and Thermal Burns in Porcine Skin," which was a result of research performed under contract at the Battelle Memorial Institute, Biomedical Research Center, Columbus, Ohio, and funded by the Defense Threat Reduction Agency, Chemical Biological Medical Systems, and the U.S. Army Medical Research and Materiel Command.

Graham, who currently serves as acting chief of the institute's Program Strategies and Operations Office, designed the experiment and, as the technical point of contact, oversaw its execution at the Battelle BRC, in support of his DTRA-sponsored work in wound healing of injuries to the skin caused by the chemical warfare blistering agent sulfur mustard. He also participated in the writing of the manuscript. Graham's research at USAMRICD has contributed to a better understanding of the depth of burns caused by exposure to sulfur mustard as well as to the effectiveness of wound dressings and debridement techniques to facilitate the healing of sulfur mustard-induced skin injuries.

The research described in the award-winning paper compared thermal burns and those caused by sulfur mustard to evaluate the underlying molecular mechanisms of tissue damage. Such information is useful to answer whether thermal burn therapies, often applied to treat sulfur mustard burns, are really optimal for the skin injury caused by this chemical agent. The study identified seven biological functions affected similarly by the two types of burns. The biological functions, which were either activated or diminished, involved the growth and maintenance of tissue as well as the response of tissue to damage. The ultimate goal of such studies is to identify an improved treatment regimen that results in a more rapid and complete healing of skin injury caused by sulfur mustard exposure.

The first author on the paper was Dr. James Rogers of the Battelle BRC; other Battelle authors were Jennifer Price and Frances Reid. Dr. James McDougal from the Boonshoft School of Medicine, Wright State University, in Ohio, was also an author.

Cindy Kronman
USAMRICD public affairs specialist

WRAIR Wins Award by "Going Green"

The Walter Reed Army Institute of Research and the Naval Medical Research Center received a 2009 Outstanding Achievement in Recycling Award May 21. The award was presented by the Montgomery County Department of Environmental Protection's Division of Solid Waste Services as part of its annual Recycling Awareness Week activities. WRAIR/NMRC received the award in recognition of its commitment to expanding recycling opportunities and education throughout the campus, located on the Forest Glen Annex in Silver Spring, Md.

Left to Right: Bob Hoyt, director, Montgomery County Department of Environmental Protection; Matthew Robért, WRAIR/NMRC environmental coordinator; Eileen Kao, chief, Waste Reduction and Recycling Section; and Alan Pultyniewicz, Montgomery County recycling coordinator.

Accepting the award on the WRAIR commander's behalf was Matthew Robért, environmental coordinator for WRAIR/NMRC. "I was pleasantly surprised on hearing the news we were nominated for a recycling award" said Robért. "I have always thought we were improving every day in our recycling efforts, and I'm delighted to see that the Montgomery County inspectors think we're doing a good job too." WRAIR/NMRC was nominated by LaToia Walker, program specialist with Montgomery County's Business Recycling Program.

When asked what he attributed the overall improvement in the program to, Robért responded "It is sometimes a delicate balancing act. You have to balance aesthetics with convenience for users, and you have to make it easier to recycle than to toss it in the trash. We've looked carefully at ways to maintain participation from staff, visitors, and the command." WRAIR/NMRC has maintained this balance using recycling bins made from recycled plastic; these bins are the same ones currently being used in the Pentagon.

Robért credits his close working relationship with the environmental staff at both the Walter Reed Army Medical Center in Washington, DC, and recently with Fort Detrick in Frederick. "In this environment of doing more with less, I have had to become very creative finding the funding for this project." In the past 2 years since Robért has been at WRAIR/NMRC, 40 recycling bins have been placed throughout buildings and near outdoor gathering places on the WRAIR/NMRC post. "I think it is a good program, an important program. We must preserve our natural resources, and it is the right thing to do. It is great that an outside agency has recognized us for all of our hard work," said Col. Kent E. Kester, WRAIR commander upon learning of the award.

In March 2008, WRAIR/NMRC established a recycling center and launched a campaign to begin recycling materials other than the basics (i.e., paper, plastic, glass, metal, and cardboard). WRAIR/NMRC currently recycles all rechargeable batteries, alkaline batteries, laser and inkjet printer cartridges, copier cartridges, cell phones, and plastic grocery bags. WRAIR/NMRC is expanding the recycling program and working hard to make it even better. "We still have more recycling to do before we reach the Montgomery County goal of a 50% diversion rate, but we are well on our way." said Robért. The WRAIR Safety and Environmental Office hosted successful Earth Day events in 2008 and 2009. Both events were anchored by a static display of hybrid vehicles and included recycling education opportunities.

Source information provided by WRAIR

USAMMCE Honors Civilian Employees

The U.S. Army Medical Materiel Center, Europe honored 40 of its employees in a Civilian Length of Service Ceremony July 2. Employees were honored for 25, 30, 35, and 40 years of service to the U.S. Government. The grand total among them was 1,170 years of service. The Lord Mayor of the City of Pirmasens helped USAMMCE commander, Col. Mitchell E. Brew, present the certificates. After the ceremony, employees were treated to a buffet lunch and then given the rest of the day off. Brew said that he is very proud of his employees, their hard work, loyalty, dedication, and what they represent to future generations. "They inspire, teach, counsel, and mentor."

Doris Crittenden
USAMMCE Public Affairs Office

WRAIR Deputy Commander Receives Prestigious Award from Kiwanis International

Col. Donald Gray Heppner, Jr., M.D., deputy commander of the Walter Reed Army Institute of Research, was recently honored by Kiwanis International for his critical role in the development of a promising vaccine against malaria. Heppner was presented with the 2009 Kiwanis World Service Medal. Established in 1985, the award recognizes individuals who devote a significant part of their lives to meeting the needs of others. One medal is awarded each year, and the Kiwanis International Foundation adds a $10,000 grant to assist the honoree in furthering his or her effort. Previous winners include Mother Teresa, Sir Roger Moore, Audrey Hepburn, Nancy Reagan, and Rosalynn Carter.

On receiving notification of the award, Heppner was deeply moved. "I had welcomed my Lynchburg, Virginia, hometown nomination, but never, ever anticipated one of the world's preeminent charities for children would recognize the importance of Walter Reed Army Institute of Research's efforts to fight malaria. I hope this Kiwanis award will inspire thousands more to join the fight."

Heppner said he would donate the $10,000 grant to a Kiwanis school in Africa that helps children and families hit hard by malaria.

Malaria is one of the most devastating diseases of children around the world. This severe and incapacitating disease is a global problem that is estimated to lead to 350–500 million episodes of malaria and anywhere from 1 to 3 million deaths worldwide, mostly children. Today, at least half of the world's population or 3.3 billion people are at risk of malaria. The good news is WRAIR is on the cutting edge of a vaccine to prevent infection in both Warfighters and children who are exposed to the deadly parasite and is dedicated to finding a cure for malaria.

Tiffany Holloway
USAMRMC Public Affairs Office

Retired Command Sgt. Maj. Norbert Miller with the Soldiers of USAMMCE.

Retired Officer Visits USAMMCE

Soldiers at the U.S. Army Medical Materiel Center, Europe were visited by retired Command Sgt. Maj. Norbert Miller. While providing an inspirational lecture on service and Army values that he has learned over his 30 years in the Army, the Soldiers learned lessons and were able to discuss his experiences.

Miller retired in 2006 and most recently has served as a senior medical mentor for MPRI supporting Afghanistan civil authorities. Miller served for more than 10 years as a command sergeant major and is a veteran of Operation Iraqi Freedom 3 where he served as the command sergeant major for the 32nd Medical Logistic Battalion and of operations in Grenada as a ranger medic with the 2nd Ranger Battalion.

Doris Crittenden
USAMMCE Public Affairs Office

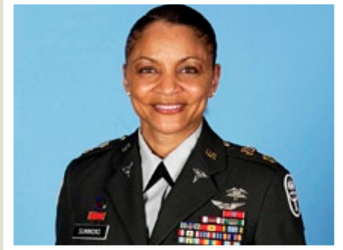
Millard Promoted to Colonel

Col. Charles Millard was promoted July 15 at the U.S. Army Medical Research and Materiel Command, Fort Detrick, Md. He has served in positions of increasing responsibility within the Medical Chemical Biological Defense Research Program for USAMRDC/USAMRMC since 1991, contributing more than 50 peer-reviewed publications, as well as numerous book chapters, U.S. patents, abstracts, technical reports, and solved x-ray crystal structures. Millard earned a bachelor of science degree and a doctoral degree from the Division of Biological Sciences of the University of Chicago. He is a 71B biochemist in the U.S. Army Medical Service Corps and a member of the Army Acquisition Corps. His military accomplishments include the MSC "A-proficiency" designator as a biochemist, the MSC Award of Excellence, and honor graduate at the resident Army Medical Department Officer Advanced course.

Source information provided by USAMRMC

Maj. Gen. James Gilman congratulates Col. Charles Millard and his family, Laura and Charles Brian.
Photo by Dave Rolls

Major Recognized with Karen Wagner Leadership Award



Maj. Yolanda Summons recently received the Karen Wagner Leadership Award during the Association of the United States Army conference held in San Antonio, Texas July 24.

Summons currently is assigned as the deputy assistant troop commander/deputy chief of staff for Personnel of the U.S. Army Medical Research and Materiel Command, Fort Detrick, Md. Prior to this assignment she was deployed with Task Force 62nd Medical Brigade as S-1. Her actions were critical in the management of the complex and multitude of personnel issues related to seven direct reporting units geographically dispersed over 38 locations throughout Iraq. She managed the 90- and 180-day rotator program, which led to the seamless transition between critical providers for 556 Active Component rotators, 316 Reserve Component and National Guard rotators, as well as 22 Air Force and 22 Navy providers.

Summons' technical competence was displayed as she managed every aspect of the mission by providing extraordinary support for over 3,500 service members, expeditiously processing over 10,000 actions, including over 3,762 combat awards, 6,178 system transactions, and 958 evaluations. As a result of her efforts, the Joint Medical Task Force achieved a 99% rating for over 7,846 Soldiers departing theater with their awards and evaluations in hand. Summons' actions reflect her internal drive to provide compassionate world-class customer service to seniors, peers, and subordinates alike.

The Karen Wagner Leadership Award was established in 2004 to honor Lt. Col. Karen Wagner, an Army Medical Department Health Services human resource manager, who lost her life as a result of the terrorist attack at the Pentagon September 11, 2001. The award is presented annually by the Army Surgeon General to recognize outstanding Medical Service Corps human resource officers who demonstrated the characteristics of professionalism, integrity, competence, customer service, and leadership. The program is designed to recognize human resource officers from both the Active and Reserve Components. Selection for this distinction is based on the overall leadership and performance of the officer during a 12-month period. Among the factors considered are: leadership performance, technical competence, commitment to Army values, and customer service qualities demonstrated above and beyond expectations. Each recipient receives a framed Phoenix Medallion in recognition of excellence in professionalism, integrity, competence, and leadership.

Source information provided by the Association of the United States Army

USAMRMC Deputy Chief Receives LULAC Award

The U.S. Army Medical Research and Materiel Command is proud to announce that deputy chief of staff of operations, Lt. Col. Jose Andujar, is the 2009 League of United Latin American Citizens "Excellence in Military Service Award" winner for the Army. He was recognized at the 80th LULAC National Convention and Exposition, Puerto Rico Convention Center, San Juan, Puerto Rico, July 16.

LULAC is the largest and oldest Hispanic organization in the United States. LULAC advances the economic conditions, educational attainment, political influence, health, and civil rights of Hispanic Americans through community-based programs operating at more than 700 LULAC councils nationwide. The organization involves and serves all Hispanic nationality groups.

USAMRMC Public Affairs Office

To submit articles and information to ***The Point,*** please contact Tiffany Holloway at 301-619-7549 or Tiffany.Holloway@amedd.army.mil

DoD Holds Blast Injury Research Program Meeting

Attendees of the May 12–14 International State-of-the-Science Meeting on Non-Impact, Blast-Induced Mild Traumatic Brain Injury.

Continuing efforts are being made to recognize, understand, and treat mild traumatic brain injury. The Department of Defense Blast Injury Research Program Coordinating Office, in coordination with the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, held an International State-of-the-Science Meeting on Non-Impact, Blast-Induced Mild Traumatic Brain Injury May 12–14.

So, what is non-impact blast exposure and when does it occur? Non-impact blast exposures occur when Warfighters are close enough to an explosion to experience the high pressures created by the blast itself but far enough away to avoid penetrating injuries caused by fragments and blunt impact injuries caused by debris or whole-body translation. The existence and mechanism of a non-impact, blast-induced mTBI continues to be a key knowledge gap in the DoD portfolio of blast injury research.

Seventy-five experts representing Canada, Japan, the Netherlands, and the Departments of Defense, Transportation, and Veterans Affairs, as well as academia and industry, met in Herndon, Va., to critically examine research focused on the relationship between blast exposure and non-impact, blast-induced mTBI and to get a clearer understanding of the current state of the science on the existence and mechanisms of non-impact, blast-induced mTBI.

For the first day and a half, scientists who study non-impact, blast-induced mTBI presented their research on topics ranging from blast physics and mathematical modeling to animal modeling and neurocognitive studies in humans. A four-member panel of accomplished and respected scientists listened to each of the 27 presentations and led post-presentation discussions.

"I wanted to present our research and receive feedback. I also wanted to see what others had to say. It's important that we don't duplicate research." said Douglas DeWitt, professor of Anesthesiology at the University of Texas, who presented a talk on the characterization of a new rodent model of blast-induced brain injury.

"No one has the answer right now, and I'm looking forward to the new data and collaborating with other experts in the field. It's nice to know if what you've been doing is fitting with everyone else's research," said Pamela VandeVord, associate professor at Wayne State University, who spoke on understanding shock wave transmission to the brain.

On the afternoon of the second day, participants divided into work groups to address four issues pertinent to non-impact, blast induced mTBI: the association of non-impact blast exposure with a physical mTBI, the existence of substantial evidence to support one mechanism as the most plausible explanation for how non-impact blast exposure is associated with mTBI, research gaps regarding the association between non-impact blast exposure and mTBI, and recommendations regarding how researchers could standardize research methods to facilitate research synthesis of comparable studies.

On the third day, panel members and staff from the DoD Blast Injury Research Program Coordinating Office met to distill the conclusions and recommendations made by the work groups.

Based on data presented at the meeting and other published and unpublished studies, the work groups concluded that there is sufficient evidence from clinical and animal studies that non-impact, blast-induced mild trauma to the brain can occur. However, the work groups also determined that there is insufficient evidence to support any one mechanism of insult or any one physiological response as the most plausible explanation for the association of non-impact blast exposure with mTBI.

The work groups agreed that the current working definition of mTBI does not entirely meet the needs for the clinical assessment of brain injury. mTBI is currently defined by exposure to a blast event and through self-reporting of symptoms. The current working definition encompasses any postexposure alteration of mental state at the time of injury, any loss of consciousness lasting 30 minutes or less, or post-traumatic amnesia lasting less than 24 hours.

The work groups and executive panel identified several knowledge gaps regarding the association between non-impact blast exposure and mTBI and proposed potential research to close the knowledge gaps. The knowledge gaps concern the components of a blast responsible for the insult and injury, the clinical correlates of non-impact blast exposure, the existence of validated computational models for blast injury, an understanding of the neuropathological data surrounding blast injury in humans, the sharing of data across research entities, access to data from historical blast injury research, and scientifically informed strategies to improve protection, prevention, and treatment for blast-related mTBI.

Recommendations on how to standardize research methods to facilitate research synthesis of comparable studies included the use of common data elements, the establishment of data repositories for researchers to compare findings across models, an increased use of peer-reviewed literature to disseminate findings, the development of a simple far-forward evaluation platform to assist in early diagnosis of mTBI, and the creation of specialized Integrated Product Teams to review emerging findings and make recommendations for areas of additional research and changes to clinical practice. The work groups also recommended an increase in interdisciplinary collaborations, the use of standardized research methods to facilitate synthesis of comparable studies, improved documentation of experimental and modeling research, and the inclusion of proper control groups and protective equipment in the design of experimental research.

"This meeting helped us understand what is currently known and what is not known about the existence and mechanisms of non-impact, blast-induced mTBI. It's critically important to understand the current state of the science on this topic in order to help us make informed recommendations on Soldier protection, diagnostic, and treatment strategies and to help us shape future research efforts that focus on filling knowledge gaps," said Michael J. Leggieri, Jr., director of the DoD Blast Injury Research Program Coordinating Office.

A summary of the meeting proceedings is posted on the DoD Blast Injury Research Program web site at https://blastinjuryresearch.amedd.army.mil.

Tiffany Holloway
USAMRMC Public Affairs Office

Military Awards

Meritorious Service Medal

June 2009

Maj. Kristen M. Bauer
Capt. Deandra D. Brill
Lt. Col. James F. Cummings
Sgt. 1st Class Nympha Joy Dearman
Col. Leland W. Dochterman
Lt. Col. Claire A. Joseph
Lt. Col. Otha Myles
Master Sgt. Joel R. Riley
Sgt. 1st Class Michael A. Roberts
Capt. Thomas G. Robinson
Maj. Kirsten S. Smith
Lt. Col. Randy Story
Maj. Xiaolian Tan
Staff Sgt. Robert K. Wolfskill
Maj. Max T. Wu

July 2009

Maj. Krystal Bean
Lt. Col. Song Gotiangco
Sgt. 1st Class Darren Hall
Maj. Louis Huzella
Sgt. 1st Class Harrison Jules
Col. Ronald King
Lt. Col. James Koterski
Maj. Gregory Rule
Sgt. David Villarreal
Col. Douglas Walsh

Army Commendation Medal

June 2009

Sgt. Denise L. Hughes

Promotions

May 2009

Sgt. Macario Patten

August 2009

Sgt. 1st Class Bryon Pieper

Awards

May 2009

Dr. Art Estrada
30 Years of Government Service

June 2009

Mr. Joseph Licina
Order of St. Michael Medallion

Mr. Larry Woodrum *Meritorious Civilian Service Award*

To submit articles and information to ***The Point,*** please contact Tiffany Holloway at 301-619-7549 or Tiffany.Holloway@amedd.army.mil